



dry facts

...from Arctic India Sales

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FROM EXPERIENCE COMES TRUST IN QUALITY

The International Way

Bry-Air has been in the environmental control business for 23 years. It has been associated with the Dutch for fifteen years and the Indians for eight. Maintaining quality has been the hallmark of the company. Substantial investment in research and development since 1981 have resulted in continuous improvements in the equipment and today the company has a dehumidifier 60% more energy efficient and a unique and superior plastic dryer.

The international network has already capitalized on these energy efficient, superior quality products. Delair, the Dutch company has a strong hold of markets in Western Europe. Bry-Air (India) has emerged as an exporting base of the same quality product to South East Asia. At this juncture Bry-Air is poised truly to address a global penetration.



Meet the Men at the Helm

From L to R: Mr. Anton Ommert, President of Delair, Holland, Mr. Paul Griesse, President Bry-Air Inc. U.S.A., & Mr. Deepak Pahwa, President Bry-Air (India).

BRY-AIR INTERNATIONAL MEET—

To Meet Tomorrow's Objectives



The Governor of Ohio, Richard F. Celeste took special interest in the Bry-Air International meet and hosted a lunch for Bry-Air executives at his residence. The picture shows Governor & Mrs. Celeste with the Bry-Air family.

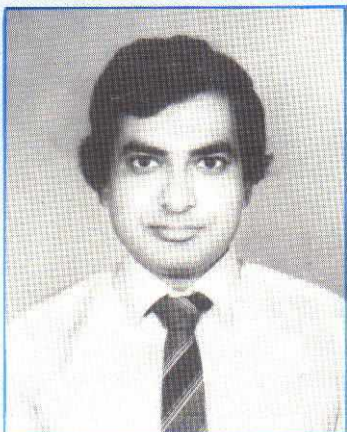
The joint thrust towards world leadership was reiterated at the 2nd Bry-Air International meet held at Sunbury-Ohio, headquarters of Bry-Air Inc., between May 21st and 23rd. Reports from the three plants in the U.S., Holland and India confirmed that business was on the upswing and the product quality was top of the line.

Significant developments which will take shape during the course of the year, and will help to achieve the objectives are—Bry-Air International Newsletter, R&D lab at the India Plant, considerable expansion at the Delair facility, and Bry-Air exports to China.

Other highlights of the meet were the lunch at Ohio Governor's residence and a visit to King's Island—an amusement park.

NEWS

A.I.S. HAS A NEW OFFICE AT CALCUTTA



Mr Tapan Das

Effective 1st July 1986, Arctic India Sales moved into a new office space at 38, Block-B, New Alipore, Calcutta.

The Calcutta branch will now be managed by Mr. Tapan Das. A Mechanical engineer, he has considerable experience in marketing, management and sales having worked with Balmer Lawrie and Co. Ltd. and Greaves Cotton for several years.

Alongwith his back up sales and service staff, potential buyers and customers can look forward to able support for sales and service from the Calcutta office in our traditional style.

BRY-AIR EXPORT DIVISION WELCOMES MR. GUPTA



Mr Dinesh Gupta

Mr. Dinesh Gupta is our new Sales Manager — International Division with overall responsibility for all export activity.

An engineer by background he is also a post graduate in international marketing. As L&T's member of export division for 5 years, he has considerable experience in export of engineering products to S.E. Asia.

We are confident that under his guidance Bry-Air exports will be further strengthened and support our network of very able agents.

PLASTIC DRYERS

The beginning of another Bry-Air success story

The Bry-Air range of Plastic Dryers represents a new generation of air dryers which combine the proven benefits of desiccant drying with plastic technology for the 90's.

With the expanded use of engineering plastics in recent years, greater drying quality has become essential. The Bry-Air RM series dryer was designed specifically to dry these demanding materials.

- The RM series dryers deliver -40°F or lower dew-points, regardless of ambient air conditions.
- As distinct from other drying systems, the Bry-Air dryer in conjunction with the drying hoppers dry the plastic resin to the core.
- The resin is fed continuously from the drying hoppers to the molding machine through a pneumatic system without adsorbing moisture or losing heat.
- It also incorporates a sophisticated dewpoint/control/microprocessor system with built-in alarms to promote energy savings. Sophisticated temperature controllers maintain accuracy to $\pm 1^\circ\text{F}$.
- The RM Dryers incorporate deep desiccant beds filled with molecular sieve to provide low dewpoint air consistently. The unique closed-loop, cool-down cycle increases the adsorption capacity of the desiccant by cooling it without introducing moisture-laden air.



WHEN MOISTURE IS TORTURE!!!

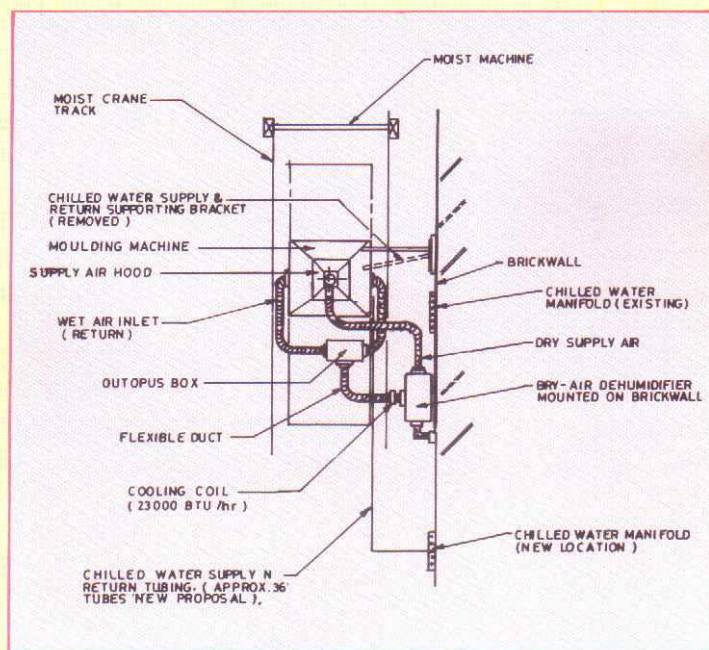
The MVB & Plastics Drying

Central Mold Dehumidification

Desiccant dehumidification offers significant benefits to plastic processors in a variety of ways other than pellet drying. Dehumidification totally eliminates condensation and sweating on chilled molds. The elimination of mold sweating decreases rust and corrosion of the mold, thereby reducing maintenance and downtime. Further the quality of the molded part is enhanced by eliminating bubbling and streaking. The processor also benefits from being able to lower mold temperatures, thereby decreasing cycle times and thus improving machine productivity.

A Case Study

Cap Snap Seal, Inc., had in a room, 24 injection molding machines. The molds had to be chilled to release the parts. The cold mold upon opening would be covered with condensed water. They tried to reduce mold sweat with refrigeration, using two 30 Ton units. Bry-Air supplied a 6000 cfm 'MVB' desiccant dehumidifier to control the space humidity in the entire room.



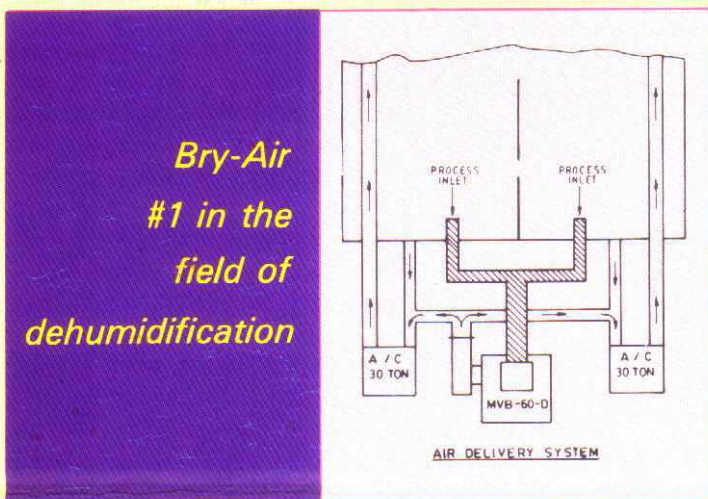
Diagram—2

The system was designed to maintain the processing area at a humidity at a dewpoint below 1.6°C thus eliminating condensation on chilled molds. Diagram 1 shows the air delivery system with the dehumidifier in the return air system.

The equipment cost was much cheaper than providing a dehumidifier for each individual machine. This also eliminated the need to tent each machine.

However the concept works well where the number of working machines are small, may be one or two. Diagram 2 shows the dehumidified air delivery system for a single machine. A hood is created on the moulding part in a single injection machine and dehumidified air is continuously fed to keep the RH low and thus prevent condensation.

A 300 Cfm units was supplied by Bry-Air (India) to Malaysia for this application.



Diagram—1

Bry-Air
#1 in the
field of
dehumidification

Some Recent Applications

- ★ Dehumidification in the Creel Area for steel cord conveyer belting in tyre manufacture has found worldwide application with companies like Goodyear, Armstrong General Tyre and Rubber and Firestone. In India, Vikrant Tyres and MRF are using Bry-Air equipment for similar application.
Dunlops (India) has recently ordered a MVB-30C to maintain $45 \pm 5\%$ RH at a temperature of $100^\circ \text{F} \pm 5^\circ$ in a creel room area of 187500 cft.
- ★ In the production of semiconductor integrated circuits and printed circuit boards, strict humidity control is required. Excessive moisture causes adhesion failures, stress fractures and surface defects. Plastic laminates also require strict humidity control.

Hiprint Corporation are using a B.A. 1.5A for controlling humidity for the processing of printed circuit boards.

- ★ Cryptm Confectioners (I) Pvt. Ltd. while manufacturing high quality toffees/caramels, hard boiled candies with and without the centre fill, want to maintain 35% RH in their processing area with Bry-Air dehumidifiers.
- ★ Electronic telephonic exchanges do not function properly during periods of high humidity. Window air-conditioners alone do not control the humidity to the desired level. Dehumidifiers have also been supplied by Bry-Air to several stations of Indian Posts and Telegraphs in South India to maintain the desired environment.

BRY-AIR SEED DRYERS: THE STATE OF THE ART EQUIPMENT

Importance of Seed Drying

The maintenance of seed and grain quality during storage is a factor of great significance. The amount of moisture present in the grains affects both the quality and storability of the grains during long term storage. All fungi have a definite moisture level below which it will not grow. If the seed is dried to such an extent that the moisture content is in equilibrium with relative humidity below 70%, fungi will not develop.

Seed Drying Using the Dehumidification Principle

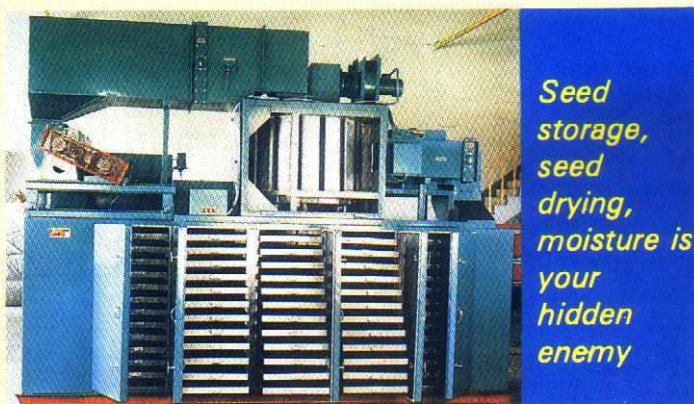
Seeds cannot be dried by exposing them to heated air as elevated temperatures will destroy their germination potential. The alternative applied is to release the moisture from the product to the surrounding air. The dryer by maintaining the air at a lower moisture level can increase the drying potential and thereby increase the drying rate. Moreover it removes the variability of weather as a factor in a drying operation.

Bry-Air Seed Dryer

The Seed Dryer essentially consists of two parts—a chamber fitted with trays where the seed to be dried is put. The number of trays vary with quantity of seeds to be dried and also the size of the equipment.

On top is housed the dehumidifying dryer, continuously feeding dry air through the chambers.

The removal of moisture is based on the principle of physical adsorption. Through experience it is found that to optimise drying capacity with minimum power consumption and to retain germination potential in the seed, the air coming out from the air dryer should be at a temperature of $100^{\circ} \pm 5^{\circ}$ at approximate 5% RH.



Typically the picture shows a MVB-10-SD-100 which has the capacity to dry 800 kgs of seeds every 8 hours. The drying air in the chamber will be approx. at $100^{\circ} \pm 5^{\circ}$ at 5% RH. Due to heat of adsorption the actual outlet temperature from this dryer will be about 140°F . This will be further cooled to $100^{\circ} \pm 5^{\circ}\text{F}$ by providing a water fed after cooler at the immediate outlet of the dehumidifier.

Seed Dryers are available in a number of models with drying capacities ranging from 50 kg to 800 kg per 8 hours.

Bry-Air dehumidifying seed dryer is a complete state of the art equipment as it incorporates a unique air distribution pattern through the trays to optimize on drying capacity and time.

The equipment is being successfully used all over the country by NSC, State seed bodies and several private seed processors.

"Reduce your fuel cost— with the high efficiency Heat Exchangers".

The three exchangers in the picture alongside have been recent shipments from the plant.

The exchanger in the centre is for a drying oven exhaust at Hyderabad Asbestos Cement Products Ltd. Designed for exhaust temperature of 320°F , the exchanger preheats incoming air to 228°F . The exchanger has an efficiency of 60% and a pay back period of 175 days at 24 hours/day.

The small exchangers flanking the bigger model are for Pace Laboratories (P) Ltd., Bombay and Chandra Laxmi Safety Glass Ltd., for recovering heat from dehumidifier reactivation outlet to preheat incoming air and thus save on heater load capacity.

